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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,342

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Raymond H. Bryden

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EXAMINER

O HERN, BRENT T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

12/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/810,342	Applicant(s) BRYDEN, RAYMOND H.	
	Examiner Brent T. O'Hern	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 40-48, 50, 57-63, 65, 66 and 70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-48, 50, 57-63, 65, 66 and 70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/1/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claims***

1. Claims 40-48, 50, 57-63, 65-66 and 70 are pending.

### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 November 2007 has been entered.

### ***Information Disclosure Statement***

3. The IDS filed June 1 2007 listing a publication in Chinese is acknowledged, however, it is noted that Applicant has not particularly pointed out any relevant portions thereof or provided an English translation of any portions thereof, thus, Applicant takes the position that there is not anything in the reference that the Examiner should consider.

## **WITHDRAWN REJECTIONS**

4. The 35 USC 112 rejections of claim 65 and 66 of record in the Office Action mailed 17 January 2007, page 3, paragraph 7, have been withdrawn due to Applicant's amendments in the Paper filed 18 June 2007.
5. The 35 USC 103 rejections of claims 65-66 as being unpatentable over Sonntag (US 6,143,239) in view of Hida (US 4,948,761) of record in the Office Action mailed 17

January 2007, page 3, paragraph 7, have been withdrawn due to Applicant's amendments in the Paper filed 18 June 2007.

### **REPEATED REJECTIONS**

6. The 35 USC 103 rejections of claims 40-42, 44-48, 50, 57-60 and 63 as being unpatentable over Sonntag (US 6,143,239) in view of Hida (US 4,948,761) are repeated for the reasons of record in the Office Action mailed 17 January 2007, page 3, paragraph 8.

7. The 35 USC 103 rejections of claim 43 as being unpatentable over Sonntag (US 6,143,239) in view of Hida (US 4,948,761) and Dussaulx et al. (US 4,990,469) are repeated for the reasons of record in the Office Action mailed 17 January 2007, page 6, paragraph 9.

8. The 35 USC 103 rejections of claims 61-62 and 70 as being unpatentable over Sonntag (US 6,143,239) in view of Hida (US 4,948,761) and Hillig (US 4,640,899) are repeated for the reasons of record in the Office Action mailed 17 January 2007, page 7, paragraph 10.

### **NEW REJECTIONS**

#### ***Claim Rejections - 35 USC § 112***

9. Claims 65 and 66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrases "wherein the oxide layer is alumina rich, having not less than 5 wt% more alumina than an alumina content in the ceramic body" in claim 65, lines 1-3 and "wherein the oxide layer has not less than 7 wt% more alumina than an alumina content

in the ceramic body" in claim 66, lines 1-3 are vague and indefinite since it is unclear how the oxide layer can have more alumina than the ceramic body when the oxide layer is part of the ceramic body.

### **35 U.S.C. 103(a) Rejections**

10. Claims 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonntag (US 6,143,239) in view of Hida (US 4,948,761).

Sonntag ('239) teaches the component discussed above, however, fails to expressly teach wherein the oxide layer has not less than 5 wt%/(7%) more alumina than an alumina content in the ceramic body.

However, Sonntag ('239) teaches alumina concentrations between 3 and 30% and 3 moles  $\text{Al}_2\text{O}_3$  for every mole of  $\text{SiO}_2$  (See col. 3, l. 56 to col. 4, l. 9 and ll. 38-53.), thus, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide various concentrations of alumina rich oxide, including not less than 5 wt%/7 wt% more alumina than an alumina content in the ceramic body, as aluminum is not required for the underlying ceramic, for the purpose of providing an oxidation protective layer for the components (See col. 4, ll. 38-43).

### **ANSWERS TO APPLICANT'S ARGUMENTS**

11. In response to Applicant's argument (p. 5, para. 6 to p. 6, para. 1 of Applicant's Paper 18 June 2007) that Sonntag ('239) does not teach an amorphous matrix, it is noted that Sonntag ('239) teaches a ceramic component (See col. 1, l. 7.) comprising a ceramic body comprising silicon carbide (See col. 1, l. 8.) and an oxide layer (See col. 4, ll. 38-53 and col. 2, ll. 53-57.) the oxide layer containing an amorphous matrix phase comprising silica (See col. 3, ll. 25-55 wherein the amorphous matrix with "part

*crystalline" comprising silica, SiO<sub>2</sub>.) and a crystalline phase provided in the amorphous matrix phase (See col. 3, ll. 25-49.).*

12. In response to Applicant's argument (*p. 6, para. 3 to p. 7, para. 2 of Applicant's Paper 18 June 2007*) that Hida ('761) does not teach the silicon carbide and alumina, it is noted that Hida ('761) teaches anisotropically-shaped crystals (*See col. 2, ll. 20-28.*), have an aspect ratio not less than about 3:1/5:1 (*See col. 2, ll. 22-28.*) and with a crystal size of about 0.2 to about 20 microns/ (0.5 to about 10 microns) (*See col. 2, ll. 20-28.*) for the purpose of providing crystals having very good strength properties (*See col. 2, ll. 38-43.*).

13. In response to Applicant's argument (*p. 7, paras. 3-5 of Applicant's Paper 18 June 2007*) that the cited references do not teach the remaining dependent claims, it is noted that Applicant has not presented any substantive argument precisely addressing any limitation in the claims.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on Monday, Tuesday and Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-0996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Brent T O'Hern  
Examiner  
Art Unit 1794  
December 17, 2007

  
NASSER AHMAD 12/17/07  
PRIMARY EXAMINER